



What Motivates People to Earn a Certification in Supply Chain Management?

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ARTICLE INFO

ABSTRACT

Keywords:

Motivation,
Expectancy theory,
Supply chain management
certification,
AHP

This research examines why people enter certification programs. This research examines the supply chain management certification program, the most popular in industry (McCaffery, Backus, & Maxwell, 2020). Extrinsic motivation (Lloyd & Mertens, 2018; Baumann & Bonner, 2016); intrinsic motivation (Quinn et al., 2021; Achtziger & Gollwitzer, 2018; Australian HR Institution, 2017); obtaining a reward or incentive (Australian HR Institution, 2017); and the cost is less than the master's program (Amoruso, 2020; Craig, 2020). AHP is used to rank the 4 criteria's primary aspects. The study sampled experts. Experts are someone with expertise and experience in a subject, system, or sector (Sharma, 2017; Skjong & Wentworth, 2001). This research indicated that incentives were the largest influence in joining a certification program. Extrinsic motivation is second, intrinsic motivation is third, and cost is fourth.

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1. Introduction

There are an increasing number of certification course programs accessible. According to Bisoux (2020) data, top education platforms such as Coursera, EdX, Udacity, FutureLearn, and others provide more than 2,500 courses, 11 certification degrees, and 170 micro-credentials, among other offerings. Many people are interested in certification courses because of the large variety of programs accessible.

According to Craig (2020), many students enrol in certification classes solely to learn specific skills that they deem valuable. They do it so that they are not required to pay for anything else, such as high costs for unused and undesirable services. Many of the students who enrol in certification courses are employees or professionals, making up a large portion of the student body.

Due to the increasing number of professionals enrolling in courses, lecture programs for professionals have become less popular. Moreover, Gee (2019) studies revealed that several campuses suffered a considerable decrease in the number of applicants for master's degrees, which supports this claim. According to Amoruso (2020), many professionals are driven to develop their abilities and advance their careers. Still, they are not interested in committing to a standard lecture program that takes a long time to complete.

A contributing factor to this tendency is the unrestricted potential for competition among other employees, most of whom do not have certification. This is because their employment is not a profession where someone cannot practice unless they have obtained a license or certificate. Thus, if someone possesses specific certifications, they will be considered unique. Because the desire to get value, benefits, and power drives them to participate in the program (Farashah, Thomas, & Blomquist, 2019).

Specifically, this study aims to learn more about the primary motivations for professionals who decide to enrol in a certification program. The instance studied in this study is the supply chain management certification program, which is the certification program that has generated the most significant amount of interest from the industrial sector (McCaffery, Backus, & Maxwell, 2020). It is critical to understand and identify the factors that influence professionals' decisions to participate in the program (Blomquist, Farashah, & Thomas, 2018; Dewi, Putri, & Dewi, 2018; Ingram et al., 2020).

Literature Review, motivation the idea of motivation is frequently defined in terms of the stimuli that originate within a person (intrinsic motivation) and from the outside (extrinsic motivation). For example, job success, institutional recognition, the nature of one's work, promotion in the workplace, and the development of one's professional and intellectual capabilities all fall under the category of intrinsic training aspects. Additionally, motivation initiates a movement, something that causes individuals to act or behave in particular ways (Gopalan, Bright, & Sturm, 2017).

According to Quinn et al. (2021) definition, motivation may be seen as an internal process that leads to conduct in order to meet a need. When a person has a need, they are driven to identify methods to satisfy that need and then take action to meet that need after they have identified those ways to satisfy that need. A feeling of contentment or discontent follows, based on how well the appraisal of whether or not the shortage requirements are met went. When it comes to one's career, motivation may be defined as the simple desire of an individual to take action in order to forward the objectives of an organization (Nabi et al., 2017). Motivation is a state of mind that stimulates an individual's desire to engage in specific actions to accomplish a goal, such as attending training connected to individual work results while also influencing organizational performance (Achtziger & Gollwitzer, 2018).

The Expectancy Theory, one of the different explanations of what motivates people is called the expectation theory. "Motivation depends on how much individuals want something and how likely they are to achieve it," states the Expectancy Theory, which explains how people get motivated. The notion that an individual's conduct can be explained by their internal demands as well as external environmental influences is the foundation of Expectancy Theory. Each person is responsible for determining their own actions. Every person has a unique set of requirements, preferences, and objectives in life. The decisions that a person makes on their behavior are informed by their observations of the outcomes (Lloyd & Mertens, 2018).

The Expectancy Theory identifies two primary factors that together play a significant part in the individual's level of motivation: These factors include valence, which is the value that a person attaches to an outcome or award, and expectancies, which refers to a person's anticipation about his capacity to get things done. For example, a person may expect that he will be able to get things done (Baumann & Bonner, 2016). In general, the Expectancy Theory holds that an individual's level of motivation is directly proportional to the accuracy of his or her expectations. If a person does not feel that he is able to accomplish anything, then he will not have the motivation to attempt to do so. As an illustration of the Expectancy Theory, consider the following scenario: An employee has the expectation that the efforts he makes to acquire a skill through training will be rewarded. As a result, the employee is more likely to put in further effort to achieve his goal.

According to the Expectancy Theory, in order to motivate employees to participate in training programs, there must be some sort of reward or incentive offered to them. These motivating incentives could be extrinsic, which refers to something external, or intrinsic, which refers to something internal. The ultimate result that employees typically want to see from their training is a job that is more fascinating and difficult, as well as an improvement in their knowledge; this will increase their incentive to attend training. This indicates that employees may desire new job-related activities after receiving training, such as receiving a raise or being given additional responsibility, and management should pay heed to these requests (Australian HR Institution, 2017).

Some of the benefits that an organization may provide for its workers, such as through a certification program, include the provision of recognition, as well as the need that workers act as a mentor to other workers and train them in the acquisition of new skills (Australian HR Institution, 2017). According to the findings of this study, there are a number of elements that might have an effect on the motivation of an individual to participate in a certification program for supply chain management. Both

managers and instructors have the ability to influence the expectations of workers as well as the factors that motivate them to make decisions. As an incentive for employees to complete their training, it is therefore recommended that managers provide help to workers (Australian HR Institution, 2017). Following is a hypothesis that is made in light of what has been discussed above:

H₁ – Factors of extrinsic motivation (supervisors support, praise, and promotions)

H₂ – Factors of intrinsic motivation (skill & career development)

H₃ – Obtaining a reward or incentive (pay raises, such as new tasks)

Certificates versus Graduate Degrees, According to Amoruso (2020), many working people desire to update their abilities in order to obtain dependable and in-demand positions; yet, they do not always willing to commit to the standard two-year graduate program that is required for this upgrade. It would seem that websites like Coursera and EdX are providing accredited training opportunities. This is owing to the fact that many students desire to pay education providers solely to teach them specific skills that they find valuable, while avoiding paying high prices for unused and unneeded services. In other words, they only want to pay for the education that they want (Craig, 2020).

As stated by the study, a certification program can bring many benefits for a person seeking to become a professional, especially the affordability of the costs incurred. The theoretical background has been used to find reasons for someone to join a certification program. Based on the theoretical information, the following hypotheses have been made:

H₄ – The cost is less than the master's program

Based on the hypotheses found as mentioned above, a hierarchy is then drawn up, which is illustrated by the results of the respondents' answers, which can be seen in Figure 1 below:

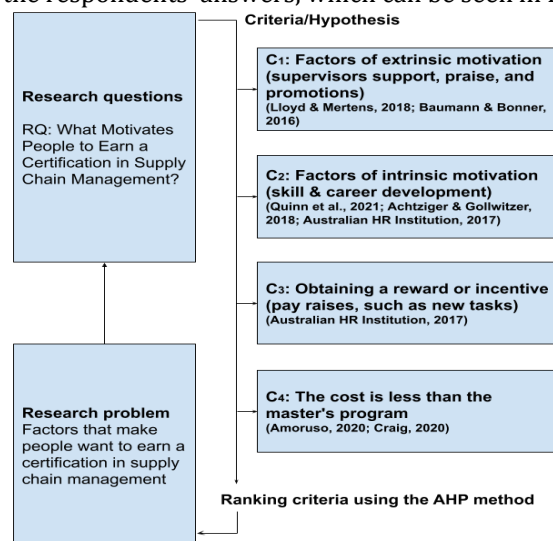


Figure 1. Research Framework

2. Methods

A quantitative approach was taken for the methodology of this particular investigation. In this stage, the data received from data collection carried out through the use of questionnaires and data processing is first quantified through the use of weighting. After that, the data that has been quantified by the process of weighting is processed by a hierarchical analysis process, also known as the Analytical Hierarchy method, and then it is examined to produce a conclusion.

2.1 Population and Research Sample

The population is the whole member or group that forms the object that is subject to investigation by the researcher. In this study, the expert sampling method was used. Expert sampling (or judgment sampling) is a sampling technique in which researchers interview a group of individuals who are known

to be experts in the field being researched. Such expertise does not necessarily mean having received formal education, but rather refers to a special knowledge. Individuals who are considered experts can be taken from academic circles, provided that of course they must master the field or topic being researched. The use of expert sampling in epidemiological studies, for example to obtain a sample of experts who will be asked to provide a "judgment" on the validity of research instruments (Sharma, 2017).

According to Skjong & Wentworth (2001) the persons who have knowledge and experience regarding a particular topic, system, or field are referred to as the experts. The process of making expert judgments involves a number of steps, one of which is the identification of experts. The following pieces of evidence may be utilized as selection criteria for individuals to fill the role of experts: (1) experience in performing judgements and making decisions based on evidence on expertise, such as degrees, research, publications, positions and experience, awards, and other such things; (2) reputation in community; (3) availability and willingness to contribute; (4) impartiality and innate attributes such as self-confidence and adaptability.

In this study, expert samples were taken from groups of students, lecturers, fresh graduates, company staff, and managers who have taken supply chain management certification. The five groups were asked questions regarding their motivation for taking the supply chain management certification program to be processed into rankings using the AHP method.

Table 1.

Expert Sampling Population		
No.	Status	Population
1.	College Student	1
2.	Lecturer	1
3.	Fresh Graduate	1
4.	Company Staff	1
5.	Manager	1
Total		5

2.2 Analytical Hierarchy Process (AHP)

Thomas L. Saaty, a mathematician from the University of Pittsburgh in the United States of America, was the first person to design the analytical hierarchy process (AHP) method. This technique is often referred to as the pairwise comparison technique. When applying AHP, the first thing to do is to segment the issue into its constituent pieces, and then to construct a hierarchical structure out of the subparts of those constituent parts. The highest level of the hierarchy is broken down into a number of lesser sets of elements, until there are, at long last, particular elements or elements that can be controlled (Li, Yang, Saaty, & Guo, 2019).

It is one of the AHP's strengths that it can perform simultaneous and integrated analysis between qualitative or even "intangible" and quantitative factors. Another one of the AHP's strengths is that it can be used to compare and contrast different aspects of a phenomenon. AHP is a type of analysis that is utilized in the process of decision making that takes a systems-based approach. After the problem that has to be solved has been defined, the next step is decomposition, which involves breaking the problem down into its component parts. If you want accurate answers, then you have to solve the elements until they can no longer be deconstructed into their component parts, which results in multiple levels of issues being obtained. A functional hierarchy is organized using AHP, with each component of the functional hierarchy being grouped into each level of the hierarchy (Baidya, Dey, Ghosh, & Petridis, 2018).

When developing a hierarchical structure, it is common practice to begin with the focus direction and work downwards to describe as many of the element's constituents as possible before switching to the alternative direction and working upwards until reaching a level at which the two directions meet and become interconnected. The application of this principle results in an evaluation of the relative relevance of two components at a given level in respect to the level above it. This evaluation is the most important part of the AHP since it will determine the order in which the factors that are presented in the form of a Pairwise Comparison matrix are considered. The findings of this evaluation will be given in the

form of a matrix and will be referred to as pairwise comparisons in the following discussion. The questions that are usually asked in the preparation of the importance scale are which element is more (important/preferred/possible), and how many times more (important/preferred/possible) as shown in Table 2.

Table 2.
AHP scale of pair-wise comparison

Intensity of importance	Definition	Explanation
1	Equal importance	Both elements have an equally important effect
3	Moderate importance	Opinions slightly favor one element over other elements.
5	Essential importance	Opinions strongly favor one element over other elements.
7	Very strong importance	An element is strongly favored and its dominance is evident in practice.
9	Extreme importance	One element was shown to be absolutely preferred over its partner, at the highest level of confidence.
2,4,6,8	Intermediate values	When it is necessary to make concessions between two

The next phase in the AHP process is to identify the relative importance or weight of each of the criteria, which entails rating the criteria from most important to least important in descending order. Using the same method as when rating the places based on each criterion, this is accomplished by making pairwise comparisons. There is no issue with relational consistency in the preference relationship that has been imposed between the two items. If element A is more significant than element B, then element B must be less significant than element A by a factor of two. When there are a lot of different things to contrast, this consistency breaks down completely. Due to the fact that people's numerical abilities are limited, the priority that is assigned to a particular group of components is not always logically coherent. In terms of computation, it is conceivable that a string of verdicts will not be consistent with one another. When it comes to prioritizing, a certain degree of consistency is essential in order to produce reliable results. The consistency ratio (CR) shouldn't be higher than 10 percent; else, the evaluation that has already been carried out may have been carried out in a haphazard manner and needs to be redone.

3. Results and Discussion

The AHP methodology was used in the performance of the criterion weight analysis. The purpose of this study is to determine the factors that play a role in an individual's choice on whether or not to participate in a certification program for supply chain management. The technique of pairwise comparison is used to calculate the weights, and the following is a rundown of the weights after they have been calculated:

Table 3.
The order of ranking criteria using the AHP method

No.	Criteria	Priority Vector
1.	Factors of extrinsic motivation	0.22157
2.	Factors of intrinsic motivation	0.1581
3.	Obtaining a reward or incentive	0.52431
4.	The cost is less than the master's program	0.09602
	Total	1.00000

It comes out that the requirements for receiving a reward or incentive are the most important reasons that inspire someone to take supply chain management certification. These criteria can be found in the list of factors that encourage someone to take the certification. The factor of extrinsic motivation comes in second, the factor of intrinsic motivation comes in third, and the criterion of the cost being less than the master's program occupies the final position in the list of criteria. Consistency analysis in the Analytical Hierarchy Process (AHP) method was determined by calculating the Consistency Ratio (CR) of each paired comparison matrix. If the value of $CR \leq 0.1$, the pairwise comparison matrix is said to be consistent. If the value of CR is greater than 0.1, the pairwise comparison matrix is said to be inconsistent. Based on the results of the CR calculation, the CR price between criteria obtained is 0.0276, where this

price is much smaller than the provisions of the pairwise comparison method, which requires $CR \leq 0.1$ so that the pairwise comparisons between criteria meet the requirements or can be said to be consistent.

Table 4.
The order of ranking criteria using the AHP method

Criteria	Factors of extrinsic motivation	Factors of intrinsic motivation	Obtaining a reward or incentive	The cost is less than the master's program	Total	Priority Vector
Factors of extrinsic motivation	0.2	0.30769	0.17857	0.2	0.88626	0.22157
Factors of intrinsic motivation	0.1	0.15385	0.17857	0.2	0.63242	0.1581
Obtaining a reward or incentive	0.6	0.46154	0.53571	0.5	2.09725	0.52431
The cost is less than the master's program	0.1	0.07692	0.10714	0.1	0.38407	0.09602
Principle Eigen Vector (λ maks)						4.07439
Consistency Index						0.0248
Consistency Ratio						2.76%

4. Conclusion

Getting a reward or an incentive is the most important motivating reason for someone to participate in supply chain management certification, according to the findings of the study presented earlier, which led to the previous conclusion. According to what was communicated by the Australian HR Institution (2017), employees want new work-related activities after receiving certification, such as receiving a salary increase or being given additional responsibilities. This is in accordance with what was communicated, and it explains why this is the case. For this reason, management has to pay attention to this in order to establish incentives like compensation raises and new responsibilities for workers who currently have supply chain management certification or prospective workers who are working toward obtaining that certification. Not only do the workers profit from this, but the corporation also gains an advantage over other businesses that do not have nearly as many people that possess specialized skills.

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